

CLAIMS

1. A fine particulate silver powder having low aggregation properties, characterized in that the silver powder has the following powder properties in which:

a. the average particle diameter D_{IA} of the primary particles obtained by image analysis of a scanning electron micrograph is 0.6 μm or less;

b. the aggregation degree represented by D_{50}/D_{IA} using the average particle diameter D_{IA} of the primary particles and the average particle diameter D_{50} by laser diffraction scattering particle size distribution measurement is 1.5 or less; and

c. the crystallite diameter is 10 nm or less.

2. The fine particulate silver powder according to claim 1, wherein the sintering starting temperature is 240°C or less.

3. A production method of a fine particulate silver powder comprising obtaining an aqueous solution of silver ammine complex by mixing and reacting an aqueous silver nitrate solution with ammonia water, reducing and depositing silver particles by adding a reducing agent thereto and performing filtering, washing and drying the particles, characterized in that the silver particles are reduced and deposited by contacting and mixing aqueous solution of silver ammine complex with an organic reducing agent, and maintaining the silver concentration to 1 g/l to 6 g/l, and the concentration

of the organic reducing agent to 1 g/l to 3 g/l in the mixed solution.

4. The production method of a fine particulate silver powder according to claim 3, characterized in that when the aqueous solution of silver ammine complex is contacted and mixed with the organic reducing agent, the silver ammine complex aqueous solution flows in a certain flow path (hereinbelow referred to as "first flow path"), a second flow path which joins the first flow path on its way is provided, and the organic reducing agent is allowed to flow into the first flow path through the second first flow path and is contacted and mixed with the aqueous solution of silver ammine complex at the joining point of the first flow path and the second flow path.

5. The production method of a fine particulate silver powder according to claim 3 or 4, characterized in that the method employs an aqueous solution of silver ammine complex having a silver concentration of 2 to 12 g/l obtained by mixing and reacting a silver nitrate aqueous solution having a silver nitrate concentration of 2.6 to 4.8 g/l with ammonia water.

6. The production method of a fine particulate silver powder according to any of Claims 3 to 5, wherein a dispersant is contained in the organic reducing agent to be used.

7. The production method of a fine particulate silver powder according to any of Claims 3 to 6, wherein hydroquinone is used as the organic reducing agent.